

Incompatible units? Try 'protocol'

For firms faced with the problem of possessing incompatible word processing (WP) units, protocol conversion can provide some measure of relief, but it is not a cure-all, IDC reports.

Incompatibility is a common problem, says **Word Processing: Protocol Conversion**, a research memorandum from IDC's Strategies for Microcomputers and Office Systems (SMOS). The problem usually develops because a firm more often than not purchases its word processing equipment from several vendors.

Although incompatibility does not pose a problem in some business settings—particularly where there is little or no need for document interchange—incompatibility is itself a significant problem. The easiest solution might appear to be to trash the existing line and start from scratch with a single vendor, but that is usually an overly expensive way out.

"Protocol conversion" refers to the process of creating compatibility among systems at the data link and various other levels. A converter or "black box" can usually provide almost immediate relief, IDC reports.

Three basic configurations currently addressing incompatibility are hardwired systems, disk-to-disk conversion and integrating network.

A hardwired converter allows communication between two dissimilar word processing systems but it can result in a slowed transmission speed. Disk-to-disk conversion is an off-line approach that is most practical when communication is infrequent and consists of large documents. The integrating network approach uses conversion capabilities that are located in a physically- or logically-central processor that provides central storage, routing and automatic translation.

The report concludes by stating that while the "great day of (total) compatibility" is not yet in sight, and while the marketplace will for the most part dictate the progress of compatibility, protocol conversion is an option that office automation managers should at least be aware of.

The report also lists several companies that manufacture and market protocol conversion systems.

Comdex/Fall '84, touted as the world's largest microcomputer display show, is set to run November 14-18 at the Las Vegas Convention Center in Las Vegas. IDC will be holding down booths 1812 and 1912.

Also, IDC's 1985 Executive Conference series is set for April 28 through May 1 at Silverado Country Club in Napa, California, where the topic will be **Information Technologies for Tomorrow's Office**.

Looking ahead to autumn of 1985, **Management Issues and Strategies** will be discussed when IDC's fall conference is held November 17 through 20 (1985) at the Fairmont Hotel in New Orleans.

More information is available from Diane Testa at IDC, (617) 872-2000.

Voice, data, more CTS watching business communications

Any business that has an annual telephone bill of \$1 million or more can benefit greatly from IDC's Communications Technology Service (CTS), reports George DeSalvo, director of the Washington, DC based service.

So can businesses with considerably lower phone bills, he quickly adds.

CTS provides its client companies with the latest information regarding communications technology in order to help them choose the equipment and services most appropriate to their needs in order to knock a few dollars off an annual communications bill, according to DeSalvo.

"We divide our service into three big chunks," he explained. "First of all, we produce written research dealing with important issues in the field of communications—including new technology and opportunities."

Second is an unlimited telephone inquiry service that allows clients to contact the CTS staff for personal consultation. Rounding out the trio is a series of conferences and on-site business briefings for client companies.

What is included in the "important issues" category?

"Everything. We cover all things having to do with data communications," DeSalvo said. "Everything" in this case includes primarily networks, data-voice, software, plain old telephone service (POTS) and voice hardware.

Some of those firms currently taking advantage of the CTS program are Fortune magazine's top 20, he noted. In addition, several government agencies make the federal government CTS's largest single client.

"We show (clients) what's happening with new technology and how they can save money. Depending on what you have to do, AT&T can be the most expensive or the cheapest long distance service." That finding is from a piece from a recent CTS bulletin, DeSalvo said.

Where communications news is the central issue, CTS likes to go to the source. He explained that CTS personnel visit the Federal Communications Commission at least three times a week.

The need for the type of service that CTS provides may at this point in time be greater than ever because "technology is really exploding," DeSalvo said that advances in voice-data integration are making that area one to watch closely.

He said that GTE Corporation is currently involved with a voice-to-text system that can take spoken data and convert it to printed form. GTE told The Boston Globe in August that such a system, with screen-display capability, will be ready by November of this year.

Conversely, Digital Equipment Corporation has introduced DEC Talk, which converts text to voice.

Is technology of this sort mind-boggling?

"It is to me," said DeSalvo. "I'm an old-timer; I'm still impressed when I see things like that."

For more information on CTS, contact Raylene Jorgensen at IDC Washington Division, (703) 893-0833.

Where is OA headed?

The single most important element of an integrated office system will soon be the ability to organize and access data.

So predicts **Integrated Office Systems**, a report produced by IDC's Electronic Office Research (EOR).

The 50-page report sets out to define "office automation" and "integrated office systems." There is a wealth of components, **IOS** points out, that is available for integration into a single system.

A successfully integrated system, beyond providing a consistent and uncomplicated user interface, must also offer inter-rupt capabilities and should be able to move part or all of a document among applications.

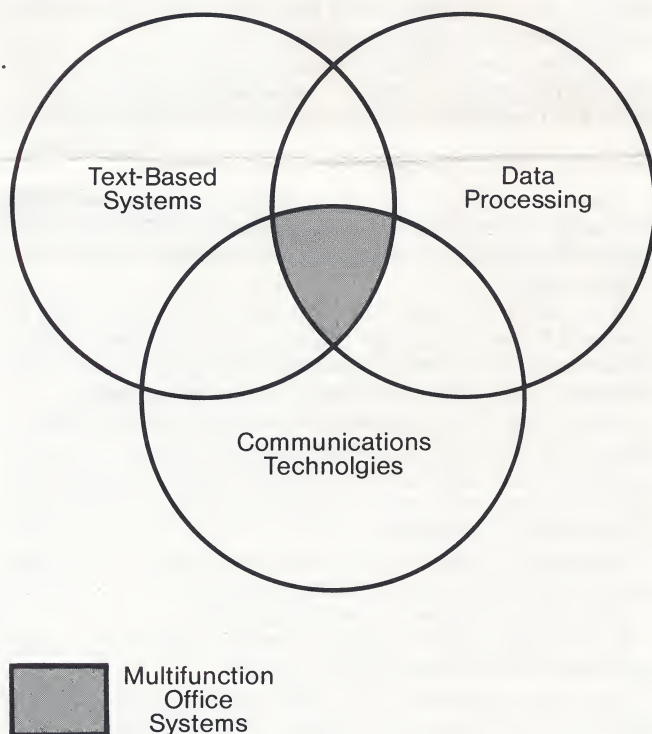
To that end, the report adds, adequate interoffice communication based on single and multivendor product compatibility is necessary.

At present, most systems operate as either standalone single-function systems or as closed systems that will work with only a limited variety of other aparati. Vendors, however, in response to user demand, are beginning to supply better user interfaces, an increasing number of functions and greater integration of data and word processing. A system that fully integrates all such components will be available before 1990, **IOS** predicts.

Some functions to look forward to include more sophisticated voice synthesis and recognition. Ultimately users will be able to dial into a computer and receive messages as if a person were speaking. Technology exists that can simulate men's and women's voices of various ages as well as regional dialects and singing.

The report also looks at such issues as user-friendliness, the growing popularity of Unix systems and security. In addition, numerous products and vendors—including IBM, Wang and AT&T—are profiled.

Development of Office Technologies



Data storage: you have a choice there, too

Conventional magnetic storage is not the only game in town, says **Storage Alternatives for the 80s**, a research memorandum produced by IDC's Information Systems Planning Service (ISPS).

The report analyzes five alternatives—optical storage, perpendicular magnetic recording, quarter-inch streaming tape cartridge, thin-film and bubble memory—to standard magnetic storage. They are alternatives that "potentially offer the computer user greater capacity."

Optical storage, a high-density memory in which images and data are stored and read by laser beam, suffers one of its greatest drawbacks in accuracy. Optical's advantages include the ability to store both images and data, high density and capacity and the ability to access information randomly.

Perpendicular magnetic recording (PMR) is similar to standard magnetic storage but it differs in that it produces magnetic fields that are perpendicular to the surface of the disk as opposed to being horizontal. PMR achieves a higher density per inch on a disk and it also significantly reduces the frequency of demagnetization and "peak shifts."

Similar to audio tape, quarter-inch streaming tape cartridges store recorded information through magnetization. It should experience strong growth due to increased capacities, low cost per megabyte and the need for a suitable backup for fixed disk drives. This tape, however, does not pose a major threat to the floppy disk drive market because of the large amount of standard software packages that are developed on floppy disks.

Thin-film storage is the technology of recording information onto disks coated with a layer of a substance as thick as a molecule. Thin-film has it over standard magnetic recording in that it allows recording heads to fly at much lower heights, thus making for higher densities and capacities.

One drawback of thin-film is its common 50 percent yields in a market that accepts 90 percent but wants 95 percent yields.

Bubble memory, so named because magnetic zones appear to be bubble-shaped when viewed through a microscope, was developed by Bell Laboratories in the 1960s. It offers such advantages as possessing no moving parts, high speed and nonvolatility.

IDC notes that bubble memory is "here to stay" for numerous applications and while it is currently more expensive than floppy and rigid disk drives, prices should fall as production increases.

New strategies needed for MIS

The scope of management information systems (MIS) has greatly expanded as office automation, telecommunications and microcomputers have merged and these new technologies have made organizational issues more complicated.

The complication arises because the MIS user is himself changing in terms of sophistication and information needs, according to a research memorandum issued by IDC's Information Systems Planning Service (ISPS).

Specifically, the expansion of responsibilities requires that a firm's MIS division learn the new technologies and adopt measures to ensure greater understanding of the user than it did in the past, the report points out.

To exclude the MIS executive from the immediate chief executive staff can result in a lack of exposure to the business strategies and also in missed opportunities to contribute to the decision-making process, **MIS Organizational Strategies** points out.

Additionally, it is probable that a non-MIS or nontechnically-oriented vice-president would not be able to comprehend MIS matters. The clear trend, according to the report, is for the MIS group to "set policy and take control."

Strategies also shows how companies are currently organizing in the areas of telecommunications, computer operations, user support, information centers and programming.

XA enters the market

What's going on with the MVS/XA?

IBM's potent new line, introduced in 1981 and made available in 1983, was developed to handle the increasing demands that its predecessor, the MVS/370 series, could not keep pace with.

In a report titled **MVS/XA**, IDC takes a look at the young entry and examines how it fits with past and future trends in the industry.

With the dominant trend in computer processing being an increase in end user computing through timesharing, online processing and personal computing, the need for the XA is obvious, IDC reports. End users require access to the mainframe during working hours, which amplifies the peak requirements during the day. This creates a need for more powerful systems.

With the exception of key-to-storage terminals, nearly every manner of terminal can look forward to growth through 1987.

The reasons for user migration to XA are numerous, according to IDC. They include making a move to XA because of its bright future, because of XA's benefits and features and because the move is necessary due to capacity constraints.

The report also describes the seven major steps—planning, training of personnel, upgrading of hardware, positioning of software, testing, implementation and post-testing—involved in converting to XA.

In addition, **MVS/XA** examines the cost of conversion to XA systems. It also profiles some early users of the system, provides a history of IBM Operating Systems from OS/360 to MVS/XA and offers numerous IDC perspectives on the new system.

How to justify expenses . . .

Office systems planners/managers needing assistance in formulating policies for cost justification—considered to be the major obstacle—for proposed office automation projects may find the help they need in a new report from IDC's **Strategies for Microcomputers and Office Systems (SMOS)**.

Titled Cost Justification for Office Systems: A Guide for Managers, the report is designed to assist office planners in formulating "effective organizational and procedural policies for cost-justification of office systems."

The report takes a three-part approach in its plan to assist office planners in addressing the issue of cost justification.

Part one lays the groundwork for effectively dealing with cost justification issues. It describes some key elements—such as firms' resistance to change and volatility of technology—that organizations must face when dealing with cost justification.

Part two analyzes data from a spring, 1984 IDC survey on cost-justification trends. Trends such as companies' requirement for justification of purchases that exceed a set dollar figure and the channeling process of office automation requests are examined.

In putting together a step-by-step guide to cost justification in part three, IDC examines how to identify worthwhile projects, the relationship among business strategy, office automation and managerial productivity, the technology used to justify office automation, and how to measure the effectiveness of an office system.

'BUNCH' companies Ganging up on IBM

The five "BUNCH" companies that traditionally provided the greatest competition for IBM need to change their strategies or make adjustments if they intend to continue competing because several other large companies are also "going after" IBM.

According to a new report issued by IDC's Information Systems Planning Service (ISPS), titled **Major Vendor Strategies**, IBM dwarfs the combined BUNCH group—Burroughs, Sperry, NCR, CDC and Honeywell—in several major categories.

IBM led the BUNCH in total revenues for 1983 by a tally of \$40 million to \$23.5 million. In the category of mainframes, size class 6 and 7, IBM leads the BUNCH 77 percent to 23 percent.

But the BUNCH companies are not sitting still, IDC points out. In fact, the outlook is that they will definitely survive, and they will wind up looking a great deal different.

There are indications that BUNCH companies are already making adjustments—some more than others—in an effort to become more efficient in manufacturing and marketing and to offer a more varied product line.

Burroughs is making its move by introducing a new "A" series of mainframes and it is looking for big things from its second largest processor, the B 7900. The company is also attempting to reposition itself in the marketplace by emphasizing a range of software products.

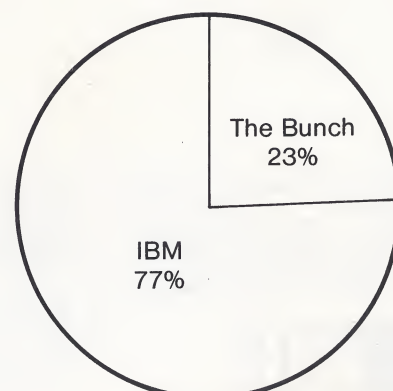
Sperry, which can claim the greatest number of installed mainframes of all the BUNCH companies, can continue to look to the military market for financial strengthening. In 1983 Sperry won an Air Force contract to the tune of \$476 million.

NCR, oldest of the BUNCH companies is likely to try to get more of the market share out of its semiconductor business beginning with its 32-bit chip. During the year NCR may be expected to introduce new specialized software, a self-service terminal and an expanded processor range.

When Cray and Hitachi appeared to be moving onto CDC's turf, CDC set out to develop the next generation of supercomputers. Industry watchers may look for CDC to also become more involved with general purpose applications and applications software.

Honeywell's large systems have classically trailed IBM and Sperry in total market share, but it will attempt to alter that with a new high-end processor that it developed with NEC. Also, Honeywell plans to "aggressively" expand its third-party service venture.

Size Class 6 and 7 Mainframes
IBM vs. The Bunch



From the wire . . .

Cellular mobile telephones supplied by AT&T Consumer Products will be distributed by NBCC Cellular Corporation of Pompano Beach, Florida, AT&T announced last month.

The AT&T Cellular Telephone System 1000 includes three models with suggested retail prices ranging from \$2249 to \$2549, excluding installation and labor costs.

NBCC will make the phones available immediately, according to AT&T.

NBCC cellular dealers are located in nine states (Florida, Georgia, North Carolina, Alabama, Kentucky, Louisiana, Mississippi and Tennessee).

IBM introduced its **most powerful personal computer** with options that include the capability to link up to 72 PCs for the sharing of information last month, the company announced.

The new IBM Personal Computer, AT, using an advanced, high-speed microprocessor, can function as a standalone or as a multi-user system, according to the announcement. The AT offers up to three million characters of user memory and 41.2 million characters of online storage.

Prices start at \$4000.

MicroPro International Corporation announced plans for a **\$195 version of its popular WordStar** word processing software tailored for IBM's PCjr.

The specially customized WordStar will run all configurations of the PCjr, MicroPro reported in August.

The company said it expects the new model to bring the power, speed and versatility of WordStar to the PCjr user. The program operates in a single disk drive and can support more than 60 printers, according to MicroPro.

Sprint Advanced Communications Corporation announced in September that it plans to introduce a new service called **Sprint Advanced WATs** that it says will give customers access to areas of the country that AT&T services.

Set to begin in November, the new service will allow callers to avert problems associated with limited calling areas and overflow into higher-priced "bands," Sprint announced.

IDC adds Canadian subsidiary

International Data Corporation (IDC) of Framingham, Massachusetts opened its first Canadian subsidiary August 8 in Toronto, Ontario.

Mark Stirling, former general manager for Evans Research Corporation, also located in Toronto, has been named president of International Data Corporation (Canada) Ltd. Two other former Evans employees, Roland Klassen and Robert Payne, have also joined IDC Canada. They will serve as programs manager and senior analyst, respectively.

Currently IDC maintains research and sales offices in Australia, China, Denmark, England, Finland, France, Germany, Ireland, Italy, Japan, Mexico, Netherlands, Norway, and Sweden. Corporate headquarters are located in Framingham, Massachusetts.

Peter Rowell, president of IDC, said that the new subsidiary will first set its sights on producing extensive research on the Canadian market.

"IDC Canada, however, is uniquely positioned to provide data not only on the Canadian information processing market, but also such information that complements our American and worldwide market research," Rowell said.

"With the data and services offered by IDC Canada," he added, Canadian firms can find help in achieving success in the highly competitive domestic and international markets."

IDC's regularly updated data bases contain information on 150,000 computer installations around the world, as well as profiles of more than 10,000 vendor companies. Product overviews for more than 30,000 products and services offered by vendors are available from IDC.

More than 150 major research reports and 14 newsletters covering all aspects of the information processing industry are produced annually by IDC.

The Canadian office is located at 15 Toronto Street/Suite 601, Toronto, Ontario, Canada M5C 2E2.

Want to know more?

IDC will be happy to provide further information regarding both the research reports detailed in this issue as well as the vendor research services of which they are a part.

To order, or to receive the Executive Summary and Table of Contents for each report:

Fill out and return the enclosed card, circling the appropriate order number as indicated, or call either the nearest sales representative (names and phone numbers below), or Dorothy Ferriter at (617) 872-8200.

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Software Watch

IDC's Micro-Focused Monthly on Software Market Developments

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Carol Weiszmann, Editor

After PC Software Tools, What?

VERTICAL APPLICATIONS SOFTWARE BOOSTING SHARE OF PC MARKET

It's been a summer on the hot seat for lots of microsoftware companies -- a time to reconsider directions, rethink market trends. For those whose stake has been pounded into the software tools turf, the times are likely a little unnerving since the unsolicited retail store sale is drying up for all but the most popular products (read: Lotus and a handful of others).

The seeds of micro rebellion have been sewn. There's talk these days that was unthinkable six months ago: "Users don't know what to do with PCs," "The machines are too hard to use," etc. The clouds everyone ignored because they were on a distant horizon are now overhead.

But (there's always a 'but') -- there are ways to survive these stormy times. A favorite technique of those with limited prospects in a big pond is to find a smaller pond. To niche.

The Virtues of Vertical Markets

It's clearly time in the personal computer market for missionary selling. New customers -- new kinds of customers -- must be persuaded to think about how microcomputer hardware and software can make them more productive.

It's worth noting that the largest pool of potential PC-using white collar workers is to be found in business services (see chart on page 2) -- which is really a huge aggregation of mostly small businesses. To get the professionals

and managers in business services to buy PC hardware and software requires not only the temptation of these novices into training but also software that very specifically meets their narrowly focused needs -- that is, vertical software.

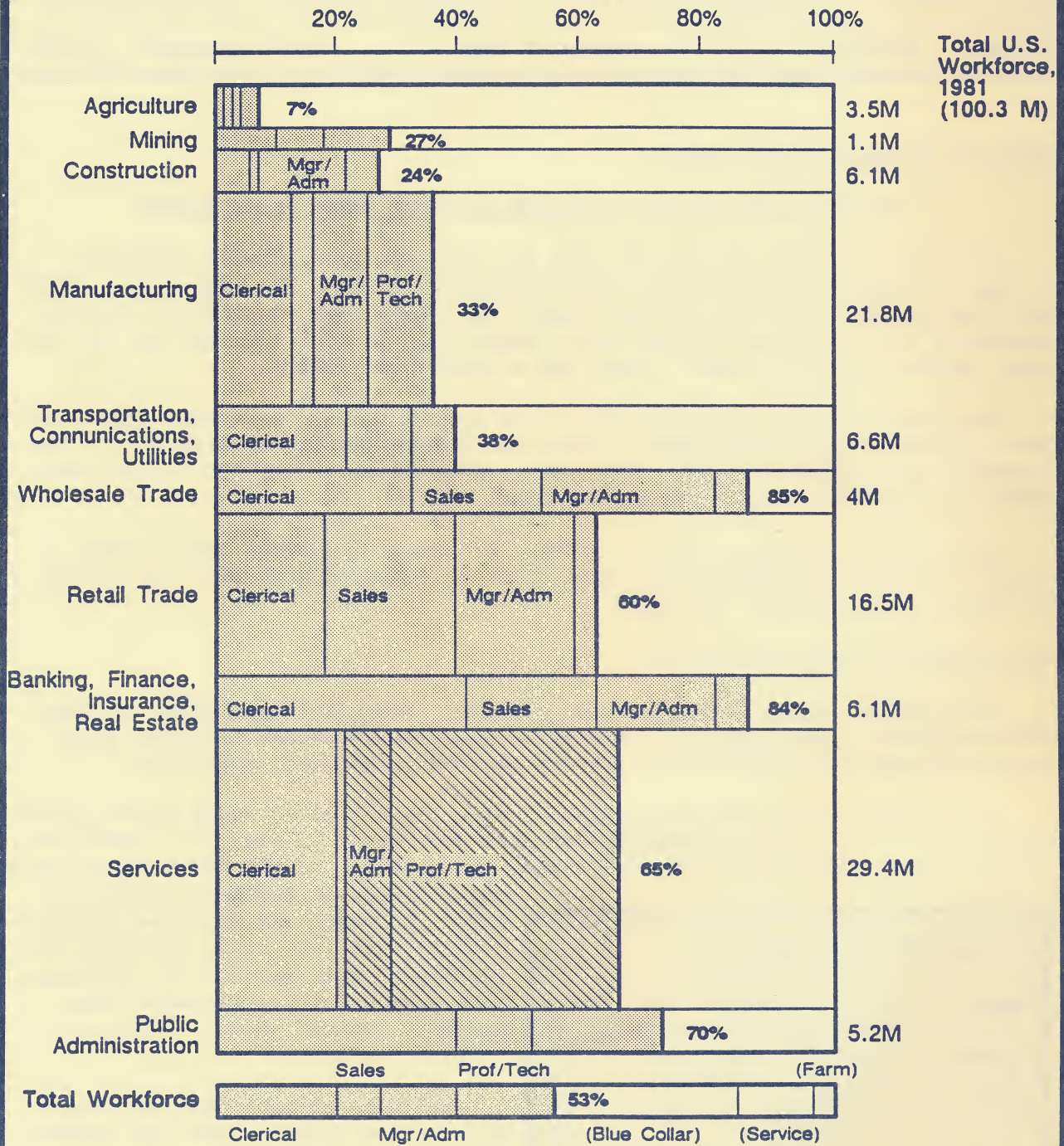
It's no accident that PC retail outlets are casting about for industry-specific orientation. The Entre Computer Store in Software Watch's neighborhood, for instance, started

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Where the White Collar Workers Are

Percent of Industry Workforce Which is White Collar



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sniffing around in real estate brokerage, even inviting real estate software vendors to demo their offerings, as long ago as last June. The owner's first choice was medical and dental practices, but he sensed there was too much competition already from other computer stores.

'Tis a hint. What SWW publisher IDC calls 'application solutions' software is where the immediate future lies for many in the PC marketplace. In fact, IDC estimates that revenue growth rates for independents selling application solutions software will average almost 40% per year through the rest of the decade. And the market for PC-based application solutions software is expected to expand nearly 50% a year.

That's not to say the largest independent software companies are going to take over the vertical niches. Quite the contrary, as the table below suggests. The biggest independents will continue to focus on application tools and system/utility software, mostly for bigger computers -- products with broad appeal that will generate substantial, and fairly stable, revenues.

(It's no accident that only two microsoftware companies made the Big Ten by yearend '83. While the end of 1984 will probably show a heavier micro presence at the top, the strongest independents will sell software aimed at

TOP TEN INDEPENDENT PACKAGED SOFTWARE SUPPLIERS

Supplier	Total 1983 Packaged SW Revenues (\$M)	% By Hardware Type			% By Software Type		
		Lge	Med	PC	S/U	Tools	Solu
MSA/Peachtree	\$ 145	30%	55%	15%	--	3%	97%
Cullinet Software	105	48%	48%	4%	5%	71%	24%
Computer Associates/IUS	77	79%	9%	12%	79%	18%	3%
Applied Data Research	76	50%	45%	5%	--	95%	5%
Cincom Systems	75	47%	53%	--	--	93%	7%
Informatics General Corp.	73	23%	69%	8%	47%	26%	27%
MicroPro	65	--	--	100%	--	17%	83%
Uccel Corp.	63	--	91%	9%	52%	--	48%
McCormack & Dodge (D&B)	59	31%	66%	3%	--	8%	92%
Microsoft	56	--	--	100%	75%	20%	5%
Subtotal: Top 10 Independents	\$ 794	33%	45%	22%	22%	35%	43%
Total Independent Packaged Software Revenues	\$ 3,910	32%	48%	20%	15%	33%	52%

* S/U = System/Utility Software
 * Tools = Application Tools Software
 * Solu = Application Solutions Software

* See "SWW Reference" on page 2 of
Software Watch March 1984 (Vol. 1,
 No. 3) for detailed descriptions.

LEADING SUPPLIERS OF PC SOFTWARE PACKAGES

Supplier	1983 PC Software Revenues (\$M)	% Market Share PC SW Rev.	Total 1983 Packaged SW Rev. (\$M)	1982/1983 % Growth Total SW Rev.
IBM	\$ 115	8.6%	\$ 2,400	42%
Tandy Corp.	110	8.2%	110	130%
Apple	65	4.8%	65	44%
Commodore	65	4.8%	65	160%
MicroPro	65	4.8%	65	150%
Microsoft	56	4.2%	56	75%
Lotus Development Corp.	53	3.9%	53	--
VisiCorp	50	3.7%	50	43%
Digital Research	45	3.4%	45	105%
Ashton-Tate	40	3.0%	40	186%
MSA/Peachtree	22	1.6%	145	45%
Manufacturing Data Systems	16	1.2%	47	34%
Florida Software	12	0.9%	39	95%
Sorcim	12	0.9%	12	200%
Software Publishing Corp.	11	0.8%	11	175%
Software Arts	10	0.7%	10	67%
Others	598	44.5%	4,902	132%
Total PC Software	\$ 1,345	100.0%	\$ 8,115	41%

large and medium-sized computers as well as PCs. Great marketing emphasis will be placed on integrated product lines.)

It's the small entrepreneurs that need shelter in these times; they'll find it in niches that are too limited to support large firms with large revenue appetites. If they succeed in their chosen pond, they can expect to be recruited into the software families spawned by the larger companies, whose favorite growth mechanism will still be acquisition.

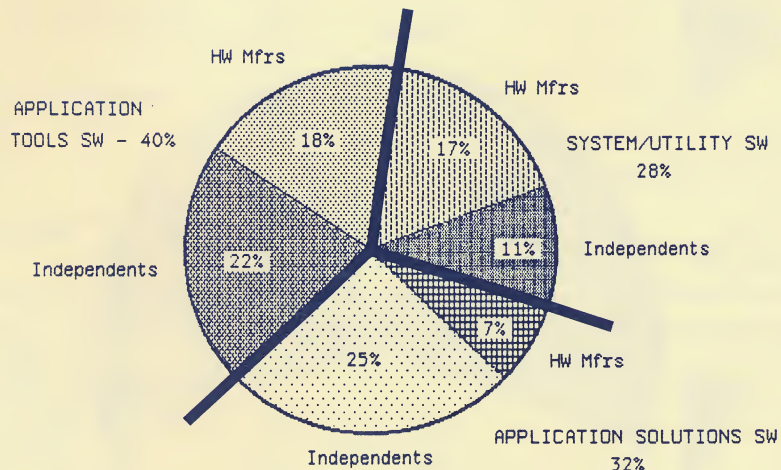
The Banner Year And Beyond

The rules of the PC software game -- at least until recently -- are clearly visible in the table above: after IBM, the ten leading PC software providers were (a) exclusively in the PC end of the software business, and (b) sold tools and system/utility software. (Note MicroPro with its word processing offerings; IDC classifies WP as "cross industry functional application solutions software," though most everyone else thinks of WP as a tool.)

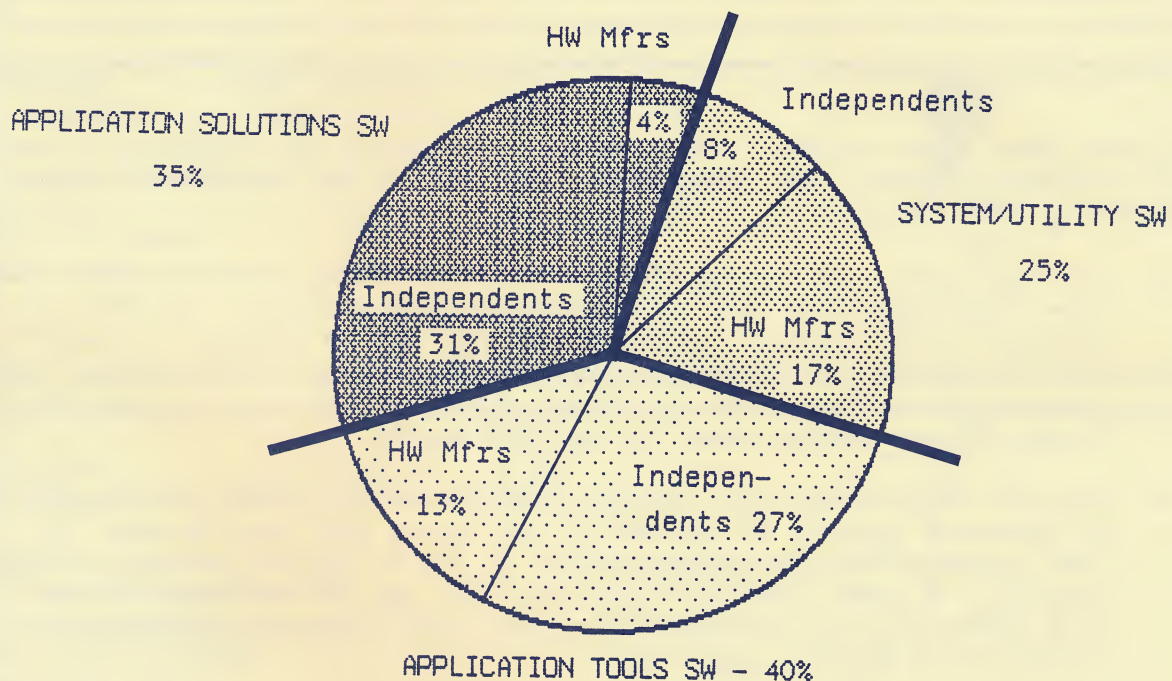
A long list of PC software vendors would show many more of them attempting to grab a share of the tools business -- as any watcher of the PC scene well knows, announcements of new spreadsheets, database management systems, decision support systems, graphics packages, etc., have been a daily occurrence for

HOW THE PC SOFTWARE PIE IS SLICED (PC Packaged Software Supplier Revenues)

1983: \$1,345 Million

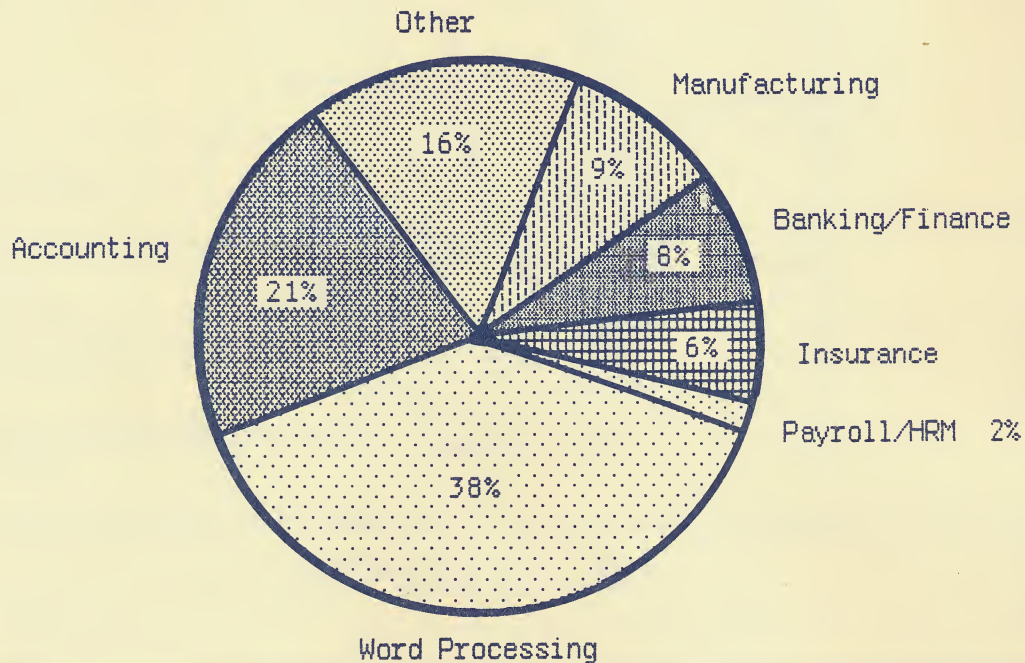


1989: \$15,290 Million



EVOLVING VERTICAL MARKETS: PC-BASED APPLICATION SOLUTIONS SOFTWARE
(Revenues of Independent Suppliers)

1983: \$330 Million



the better part of two years. 1983, however, represents what might be called the PC software market's peak experience. The rest of the decade will impose new rules on this game:

- More and more of the money independent PC software providers make will come from vertically- and horizontally-niched products. By 1989, according to IDC research, nearly a third of all PC packaged software will be application solutions products generated by independents. And independents will account for almost 90% of all the application solutions software making money in the 1989 market.
- And the independents will produce a significantly larger percentage of PC software revenues by the end of the decade than they do now. In 1983, hardware manufacturers brought in 42% of all PC software vendor dollars. By 1989, they'll claim just 34%, and half of that will be from system/utility software that often comes bundled with hardware (see related story on page 12).

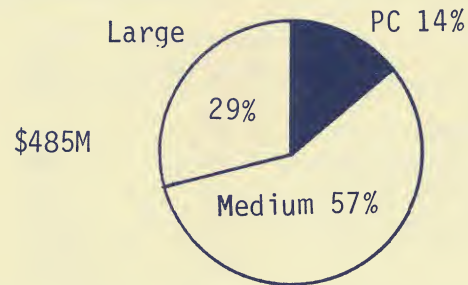
The tremendously high growth in vertical/horizontal niche software which all of this implies means that by 1989 fully 31% of application solution soft-

LEADING INDEPENDENT SUPPLIERS'
REVENUES FROM APPLICATION SOLUTION
SOFTWARE PACKAGES, 1983

APPLICATION SOLUTION PACKAGED SOFTWARE
MARKET SECTORS BY HARDWARE TYPE
(Total 1983 Revenues
Of Independent Suppliers)

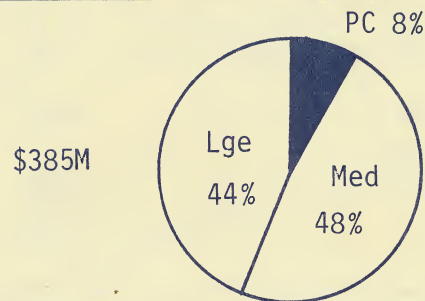
ACCOUNTING ... 1983 Revenues (\$ Millions) % PC SW

MSA/Peachtree	\$ 75	13%
McCormack & Dodge	49	-
Walker Interactive	22	-
Uccel Corp.	10	60%
BPI	7	100%



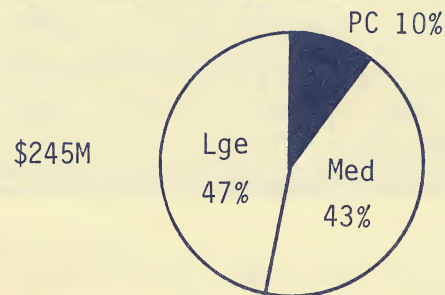
MANU-FACTURING ... 1983 Revenues (\$ Millions) % PC SW

Manuf'g Data Sys.	\$ 81	20%
Martin Marietta Data	20	-
Arthur Andersen	20	-
American Software	17	-
Uccel Corp.	6	100%



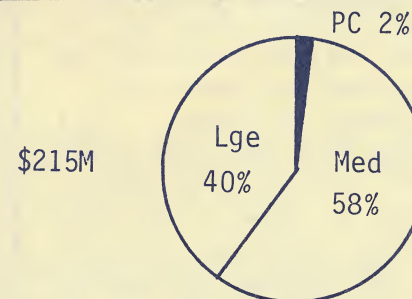
BANKING/FINANCE ... 1983 Revenues (\$ Millions) % PC SW

Florida Software	\$ 39	31%
Anacomp	23	-
Hogan Systems	23	-
Uccel Corp.	14	-
Telos	1	100%



PAYROLL/HRM ... 1983 Revenues (\$ Millions) % PC SW

MSA	\$ 55	-
Information Science	28	-
Cyborg Systems	8	-
McCormack & Dodge	5	-
Software Int'l	4	-
Sys. & Cptr. Tech.	3	-

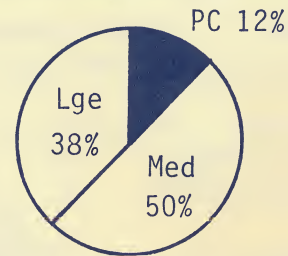


LEADING INDEPENDENT SUPPLIERS'
REVENUES FROM APPLICATION SOLUTION
SOFTWARE PACKAGES, 1983

APPLICATION SOLUTION PACKAGED SOFTWARE
MARKET SECTORS BY HARDWARE TYPE
(Total 1983 Revenues
Of Independent Suppliers)

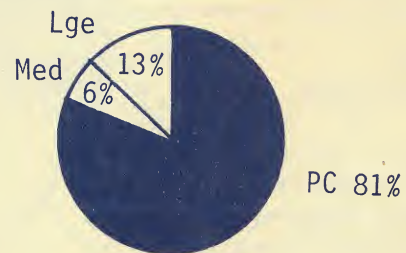
INSURANCE ...	1983 Revenues (\$ Millions)	% PC SW
Policy Mgmt. Sys.	\$ 27	-
The Continuum Co.	25	4%
Informatics General	8	75%
Advanced Sys. Applic.	4	100%
GEISCO	2	100%

\$170M



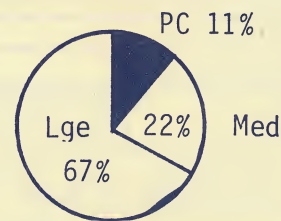
WORD PROCESSING ...	1983 Revenues (\$ Millions)	% PC SW
MicroPro Int'l	\$ 54	100%
Marc Software	9	-
MSA/Peachtree	6	100%
Microsoft	3	100%
VisiCorp	2	100%

\$156M



ELECTRONIC MAIL ...	1983 Revenues (\$ Millions)	% PC SW
Applied Data Res.	\$ 3	-
Computer Corp. of Am.	1	100%
On-Line SW Int'l	1	-

\$9M



ware revenues will come from products designed for PCs. That's nearly double 1983's 16%.

Software Watch has estimated how all those dollars will fall in 1989 into the various vertical and horizontal categories which IDC tracks (see table at right). It's not surprising that the most dramatic increases occur in the 'Other' column -- home of some of the most narrowly niched, industry-specific software on the market. PC-based 'other' applications solutions will bring in over \$1.3 billion in 1989!

% Of Application Solution Software Revenue
From PC-Based Products In 1989

Accounting	30%
Payroll/HRM	11%
Word Processing	70%
Electronic Mail	20%
Banking/Finance	20%
Manufacturing	25%
Insurance	20%
Other	45%

additional information, too). Each master is encrypted so it can only be read by the Softra terminal, which costs a dealer \$100 a month.

Since the Softra terminals are connected by phone lines to regional computers that gather up sales and customer information during non-business hours, Softra can monitor its dealers' documentation inventory and automatically deliver more documentation when needed. Softra chairman John Downing estimates that dealer inventory costs are cut by as much as 80% because they don't have to stock the diskette, only the documentation.

What's more, the company doesn't have to wait for customers to return postcards confirming purchase; the process is automatic. And the terminals also serve as electronic messaging devices for sending messages to and from its dealers all over the country.

- Microrim, Inc. has struck an agreement with Boeing Computer Services whereby Boeing will market Microrim's R:base Series 4000 relational database management system as an extension to its current mainframe- and mini-oriented relational DBMS, known as Boeing RIM.

(Both Boeing RIM and R:base 4000 have origins in the initial version of RIM, which was developed by Boeing for the National Aeronautics and Space Administration.)

The new Boeing offering has been dubbed the RIM Power Package and boasts ease of data movement between mainframes and micros as well as an English-like command language and syntax.

- Meanwhile, Microrim has signed a contract with IBM under which IBM will distribute "selected software" for the IBM PC, including the R:base Series, through its marketing representatives. IBM has also signed up Harris & Paulson, Inc. as a national Value Added Remarketer for the IBM System 36 and all its peripherals -- including the PC XT.
- AT&T Information Systems has inked a distribution agreement with Fox & Geller, Inc. AT&T will co-label and distribute FGI's line of Unix-based dBASE II and dBASE III enhancement offerings. "We plan to support their entire line of microcomputers, including the PC-3600 (MS DOS) and the 3B family (Unix)," says co-chairman Jeffrey Fox. FGI will have its products ready for AT&T's gear by this autumn.
- Forte Data Systems and Quarterdeck, Inc. have launched into a joint marketing venture in which Forte's micro communications software for IBM PCs and PC XTs will boast the windowing environment of Quarterdeck's Desq. Users emulating an IBM 3278 or 3279 terminal now will be able to simultaneously display a mainframe host session with up to eight PC DOS sessions. The combo also supports full file transfer and local printing of host data.

ACQUISITION ACTIVITY

- + Troubled VisiCorp has sold off its VisiOn applications software products to Control Data Corp., where it will be integrated into CDC's microcomputer and services product lines. CDC plans to market VisiOn to its large ac-

count customers through its Business Information Services unit; VisiCorp will continue to sell VisiOn through retail channels and retains exclusive retail marketing rights to the product line.

CDC says it will continue to invest in VisiOn development. Plans include an enhanced VisiOn Manager, applications for the IBM PC XT and compatibles (no word on the PC AT) and the Wang PC, as well as new communications products and integration with CDC's other offerings.

VisiCorp's Dan Fylstra, meanwhile, is emphasizing roots: "Our strength is in publishing quality business productivity software products and marketing them through our retail distribution channels."

- + Management Science America, home of Peachtree Software, has acquired Distribution Research Associates, which offers a distribution resource planning (DRP) software product aimed at mainframes. MSA will continue to sell the DRP product in its current configuration, but will immediately begin integrating it into MSA's own product line using fourth generation development tools. The new version will be available in 1985.
- + Shared Financial Systems has agreed in principle to buy Pacesetter Systems, Inc. from Sterling Software, Inc. Both Pacesetter and its new owner sell banking software -- Pacesetter provides retail operations software, while Shared Financial Systems' product is an on-line transaction processing system. The deal, still subject to both companies' approval, will be worth \$3 million to \$4 million.

FINANCIAL NEWS

- Microrim, Inc. has closed a private stock placement to the tune of \$5.3 million, bringing its total financing to \$8.5 million in three placements since the firm's founding in 1981. Of the \$5.3 million, \$2 million came from investors in Europe and Japan; the rest was provided by U.S. institutional investors. CEO Wayne Erickson points out that Microrim has not used venture capital financing, opting instead for private and institutional investors. The new money will be used as working capital and to fund marketing and sales programs.
- Graphic Communications, Inc., which developed the Graphwriter business graphics software product and is now under contract with Microsoft for output devices for MS-Windows, has pulled in \$1.5 million in additional venture capital financing. Firms participating in the financing: Scientific Advances (subsidiary of Battelle Memorial Institute); Piper, Jaffray & Hopwood; Abingworth PLC; The Palmer Organization; and Transatlantic Investment Corp.
- Financials from a couple of microsoftware companies are a study in contrasts: while SofTech Microsystems' revenue will "fall substantially below expectations" for the first quarter of its 1985 fiscal year (August 31), resulting in a loss, Lotus Development Corp. has reported net income for its second quarter (June 30) at over \$7.6 million, up from \$1.7 million a year ago. Lotus revenues for the first half were \$15.1 million, up from \$2.8 a year ago.

WINDOW ON THE FUTURE: IBM'S NEXT GENERATION FEATURES 'TOPVIEW'

With whose windowing environment will software developers make their applications packages compatible?

Not only has the notion of windowing been legitimized by Topview from IBM -- Ovation's promises of "seamless integration" notwithstanding -- but any version of a windowing environment, even those that are MS DOS-based, will face an uphill climb against an IBM product. Moreover, Topview, at \$149 (compared to, say, Quarterdeck's Desq at \$399) will establish the pricing ballpark on windowing environment software.

So SWW suspects the victory is a foregone conclusion -- despite the arguable advantages of MS-Windows or Desq or VisiOn or the rest. After all, this is IBM we're talking about. The company that proved it could take over a market in one fell swoop with a me-too product like the PC.

Big Blue appears to mean business with Topview. Philip Estridge, VP and President of IBM's Entry Systems Division, called it "an important addition to IBM's Personal Computer family and a key foundation for future applications." IBM has also conducted a seminar on Topview for independent software developers, reaffirming its open architecture policy, and, indeed, encouraging third party software using the Topview environment.

The best that competitors can hope for is that other windowing products will be able to compete with Topview via more and better features -- such as the portability offered by Microsoft's MS-Windows.

Implications For Applications?

It's tempting to suggest that after software developers get their hands on Topview (availability 1Q 1985), the application solutions software business will never be the same. While that might be a somewhat extreme way to put it, in fact windowing environments do promise to spawn new kinds of vertical and horizontal applications software.

Even in the most narrowly niched of markets, there's a need for such applications as word processing or spreadsheets -- it's just that these and other kinds of applications must, in effect, be customized to particular kinds of business activities.

It's not hard to see that vertical software development can be eased by building application solutions products around a windowing environment. The amount of customizing can be focused, vertical application products can be made richer and more market-specified.

And, of course, users will find application solutions packages with windowing capabilities much easier to use; their urge to expand their system's capabilities will likely grow faster and quicker, too.

In the end, windowing could significantly ease the difficulties inherent in a missionary sell to a small, narrow market niche. Vertical marketing might at last be liberated from the profit margin squeeze that has long kept it in the shadows of the information revolution.